

Listing of the Claims:

A listing of the entire set of pending claims is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application. No claims are amended in this Reply.

1. (Canceled)

2. (Previously Presented) A method of embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel, comprising:

distorting the bitstream of the primary signal by a particular distortion; and
outputting the bitstream of the primary signal having the distorted bitstream,
wherein the secondary signal is represented by the particular distortion, and
wherein distorting the bitstream of the primary signal comprises inserting local phase errors in the bitstream of the primary signal.

3. (Previously Presented) The method of claim 2, wherein the absolute value of the phase error is chosen such that it is smaller than the channel clock period of the primary channel.

4. (Previously Presented) The method of claim 3, wherein low frequency variations are introduced into the channel clock of the primary channel.

5. (Previously Presented) The method of claim 4, wherein the channel clock of the primary channel is modulated within the bandwidth of a phase locked loop circuit locked to the primary signal for synchronization.

6. (Previously Presented) The method of claim 2, wherein the bitstream of the primary signal of the primary channel consists of a stream of bits for being recorded on an optical data carrier in the form of lands and marks.

7. (Previously Presented) The method of claim 2, wherein the secondary signal comprises a copy protection key or a digital right.

8. (Previously Presented) Apparatus for embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel, comprising:

distortion means for distorting the bitstream of the primary signal such that the secondary signal is represented by a predetermined distortion, and

output means for outputting the bitstream of the primary signal,

wherein the distortion means includes means for inserting local phase errors in the bitstream of the primary signal.

9. (Original) Apparatus according to claim 8, wherein the distortion means comprises

a buffer for buffering the bitstream of the primary signal and

an encoder for generating a distortion signal and modulating the buffered bitstream of the primary signal before inputting it to the output means.

10. (Original) Apparatus for recording a primary signal of a primary channel on a record carrier comprising an apparatus for embedding a secondary signal of a secondary channel in the bitstream of a primary signal of a primary channel according to claim 8.

11–15. (Canceled)

16. (Previously Presented) The method of claim 2, wherein an absolute value of the phase error is less than one half of a channel clock period of the primary channel.

17. (Previously Presented) The method of claim 2, wherein an absolute value of the phase error is between 20% and 50% of a channel clock period of the primary channel.

18. (Previously Presented) The method of claim 5, wherein the channel clock of the primary channel is modulated with a phase or frequency modulated sine wave.

19. (Previously Presented) The method of claim 6, wherein the optical data carrier is one of a CD and a DVD.

20. (Previously Presented) The method of claim 2, wherein inserting local phase errors in the bitstream of the primary signal comprises:

clocking the primary signal into a buffer using an input clock having an input clock rate; and

clocking the primary signal out of the buffer using an output clock having an output clock rate, where the output clock rate is varied in accordance with the secondary signal.

21. (Previously Presented) The method of claim 20, wherein an average of the input clock rate and an average of the output clock rate are equal.

22. (Previously Presented) The apparatus of claim 8, wherein the distortion means comprises:

a buffer for buffering the bitstream of the primary signal, the buffer having a clock input for receiving an input clock having an input clock rate and for clocking the primary signal into the buffer in accordance with the input clock; and

an encoder for varying an output clock rate for clocking the primary signal out of the buffer, wherein the encoder varies the output clock rate in accordance with the secondary signal.

23. (Previously Presented) The apparatus of claim 22, wherein an average of the input clock rate and an average of the output clock rate are equal.

24. (Previously Presented) The apparatus of claim 8, wherein a maximum absolute value of the phase errors is chosen such that it is smaller than a channel clock period of the primary channel.

25. (Previously Presented) The apparatus of claim 24, wherein the distortion means introduces low frequency variations into the channel clock of the primary channel.

26. (Previously Presented) The apparatus of claim 9, wherein the means for inserting local phase errors in the bitstream of the primary signal includes the encoder, and wherein the encoder varies an output clock rate for clocking the primary signal out of the buffer in accordance with the secondary signal.